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SPOKESMEN for organized labor predict that deflation in the form of reduced worker income will develop when the war in Europe ends. Switching from the cost-of-living argument previously used, they advance this idea as a justification for breaking the "Little Steel" formula and granting wage increases after V-E Day. But according to Jules Backman (see feature abstract, **Will V-E Day Bring Big Drop in Income?**), this new reason for wage increases is founded on fallacies and hence is an inadequate basis for a revised national wage policy during the period following victory in Europe.

While admitting that a reduction in war output (variously put at 15 to 50 per cent) will occur after V-E Day, Dr. Backman predicts that at the end of six months only 1,300,000 workers will have been displaced by cutbacks. This estimate takes into account the voluntary retirement of temporary war workers, the retention of workers by reducing the workweek, and the return to civilian production, agriculture and self-employment of 2,600,000 persons. Furthermore, the resulting decrease in consumer purchasing power will be more than offset by the volume of savings. In fact, concludes Dr. Backman, excess purchasing power rather than a deficiency of purchasing power will continue to be a problem after V-E Day.

INDUSTRY has gone soft on costs, according to *Modern Industry*. Management in many companies has succumbed to easy-money conditions, and cost controls have been allowed to go by the board in an atmosphere of production first at any cost. Reconversion will offer such concerns an opportunity to regain their sense of costs. See page 122 (**Reconversion Time Is Cost-Cutting Time**) for 22 suggested cost-cutting opportunities.

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THE MANAGEMENT INDEX

General Management

Will V-E Day Bring Big Drop in Income?

WE ARE told that the estimated reduction in war output after V-E Day will result in a sharp curtailment of consumer purchasing power and that the cumulative effects which may be expected from such a development can be prevented only if the purchasing power of workers is substantially maintained by increasing wage rates. The claim for an increase in wage rates is being shifted from the cost-of-living argument previously used to a maintenance-of-consumer-purchasing-power argument.

After V-E Day, a reduction in war production—variously estimated at 15 per cent to 50 per cent—will take place. This will mean fewer man-hours of work available. The *Wall Street Journal* has reported that the War Production Board anticipates that approximately 5,000,000 workers will be changing jobs in the year after V-E Day. These figures are about in line with those obtained in a Department of Commerce study of the effect upon employment of a one-third reduction in munitions output after V-E Day.

On that assumption, during the first six months after victory in Europe 4,200,000 workers will be released from war production (before allowance for those retained because of the reduction in overtime), and an estimated 2,000,000 men might be released from the armed forces, making a total of 6,200,000. After allowing for the voluntary retirement of about 1,000,000

temporary war workers, the retention of 1,300,000 workers in war plants by eliminating about one-third of the increase in the workweek since 1940 (this would still assume a workweek of 43 to 44 hours), a return to agriculture and self-employment of 500,000 workers, and an expansion of 2,100,000 because of increased production for civilians, there would be at the end of six months about 1,300,000 unemployed.

What policies are required to facilitate reemployment of the workers displaced after V-E Day? Is an increase in consumer purchasing power through higher wage rates necessary to accomplish this objective? Or can it be done through proper planning of partial reconversion?

The adequacy of consumer purchasing power from V-E Day to V-J Day may be appraised in several ways: (1) the rate of government spending and the size of the government deficit during that period; (2) the relationship between the anticipated reduction in consumer purchasing power and the present volume of excess purchasing power—i.e., the amounts by which consumer incomes after personal taxes exceed the available supply of goods at present prices; and (3) the magnitude of individual savings.

Not only shall we continue to spend huge amounts on the war until victory in Japan is assured, but large-scale spending will continue for a period

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after final victory until we have liquidated our wartime obligations. General Somervell has estimated that government spending after V-E Day will be at the rate of \$71,000,000,000 annually.

Government revenues will also decline during this period because taxable incomes will be lower. Such revenues probably will not exceed \$35,000,000,000 to \$40,000,000,000. In other words, it can be anticipated that the government deficit will be at the rate of \$30,000,000,000 annually or higher. With this level of spending and a government deficit of this magnitude, it is difficult to understand how the economy will suffer from a lack of consumer purchasing power, even though part of these funds may be immobilized and not available to consumers.

This conclusion is confirmed when the expected reduction in disposable incomes is compared with the excess spending power currently available and with the volume of savings. The gross inflationary gap is now in excess of \$35,000,000,000 annually. The initial effect of the reduction in disposable incomes attending the cutback in war production would be to reduce the size of this gap, and hence to reduce somewhat the potential inflationary pressure inherent in the present situation.

On the basis of the Department of Commerce estimate that 4,200,000 workers would be released from war production and on the liberal assumption that these workers receive an average annual income of about \$2,600 (the average for all manufacturing industry is about \$2,400), the reduction in wage payments would approximate \$11,000,000,000. Even after allowing for a cutback somewhat larger than the one-third assumed in the Department of Commerce estimate and for the reduction in overtime pay, it does not seem probable that the maximum re-

duction in the wages and salary bill, before allowing for offsets, will exceed \$15,000,000,000.

According to the Department of Commerce, about three-quarters of these displaced workers should find other jobs. Even if it be assumed that these new jobs will pay substantially less than their war jobs, they would still probably yield an aggregate income of \$6,000,000,000 or \$7,000,000,000. After this adjustment, the maximum reduction in the wage and salary bill would be no more than \$9,000,000,000. Such a reduction in incomes, however, will also mean a reduction in tax payments and a sharp reduction in bond purchases. Thus the reduction in disposable incomes will be less than \$9,000,000,000.

When a reduction in disposable incomes of this magnitude is compared with the gross inflationary gap of about \$35,000,000,000, it seems clear that our problem will still be excess purchasing power rather than a deficiency of purchasing power. These data give support to War Mobilization Director Byrnes' statement that inflation will continue to be our main problem after victory in Europe.

Savings by individuals in recent years have been estimated by the Department of Commerce as follows:

Year	Amount
1939	\$ 7,300,000,000
1940	8,600,000,000
1941	20,100,000,000
1942	36,100,000,000
1943	33,000,000,000
Total	\$105,100,000,000

Savings by individuals this year probably will not be much different from the \$33,000,000,000 reported for 1943. These savings represent the amounts that individuals have left after meeting current needs. The initial effect of a reduction in consumer in-

comes, therefore, will be to reduce this enormous rate of savings rather than to reduce consumer spending. Moreover, as automobiles and other products not produced during the war are once more available, many consumers will draw upon their *past* savings to replace worn-out products. To some extent also, persons who lose their jobs will draw upon their past savings and, of course, will receive unemployment insurance of varying amounts. Finally, it is certain that business will draw upon its undistributed profits and unspent depreciation reserves to replace worn-out machinery and to make necessary repairs. This spending will also offset the reduction in consumer purchasing power resulting from the loss of war jobs.

From the above brief survey it seems clear that we shall not suffer from a

deficiency of purchasing power between V-E and V-J Days. On the contrary, excess purchasing power with the attendant pressure for price rises will still be a primary problem.

If purchasing power will be adequate during that period, what will determine whether or not jobs can be found for displaced war workers? The answer is, the speed with which we can carry out the physical process of reconversion. Only to the extent that the period of reconversion is reduced through skilful planning and execution by all concerned will it be possible to hold down the volume of unemployment. Unemployment will be a function of technology and of how the government handles its part of reconversion; it will not be a function of consumer purchasing power. By JULES BACKMAN. *Barron's*, December 11, 1944, p. 3:1.

Reconversion Time Is Cost-Cutting Time

MEN IN industry frankly admit that war production pressure and war taxes have brought on too much fuzzy financial thinking. Excess profits taxes, under which higher costs mean lower taxes, have taken temporary toll of business judgment. Engineers and supervisors have moved up the line in the past four years in an atmosphere of production at any price. Factory employees have been allowed to waste materials and tools in the rush to get out the goods. Cost controls have been relaxed, and in many cases it has been impossible to keep cost standards up to date or even to use them at all in war production.

Reconversion provides a rare opportunity to shoot for really lower costs. But it's a short-lived opportunity that

won't be repeated. The following are 22 ideas for cost-cutting that any alert manufacturer can act upon right now:

1. *Bargains in new plants.* War has added nearly 50 per cent to U. S. industrial plant capacity. Some of the new plants have no peacetime use; many, like Ford's Willow Run, will be taken over by present operators; some will be up for sale. The government is preparing to get these plants into job-making undertakings immediately after V-E Day. Catalogs listing plants for sale, giving locations, facilities and prices, are now being compiled by the Defense Plant Corporation, Army, Navy and Maritime Commission. There will be opportunities to scrap the five-story "antique" that's in a high-tax area for a modern one-floor plant out

of town. Plans are already being made for several small companies to take over large war plants jointly and share the overhead. Local ownership, plus job-making potential, will be cornerstones of government disposal policy.

2. *New plant layout.* Many companies need partial or complete rearrangement of plant equipment for peacetime production. Some concerns that had to abandon their original plant layout in the rush to war production will get a chance to improve on it during reconversion. This is an engineer's dream opportunity to straighten out production lines; eliminate waste space between processing steps; and tie production more closely than ever to receiving, storage and shipping, both to save time and to reduce inventory in process.

3. *New materials.* Materials account for 65 per cent or more of costs and are getting first attention in cost-cutting activities. Many companies have already drawn up a bill of materials for their postwar products, to serve as a basis for setting up sources of supply and for projecting costs. Each material, in order of importance, can be studied against newer materials to see which is cheapest or best. Obviously it isn't a price-tag decision alone, for sometimes a more expensive material may cut costs by shortening production time and increasing sales.

4. *More competition for your materials and parts suppliers.* Not only have new materials appeared, but capacity to turn out older materials and for parts-making is vastly increased as well. There will be new suppliers to choose from. This means more competition and a bigger opportunity to re-check prices and sources. Some companies have already found new suppliers nearer at hand and expect to cut

shipping time and needless storage as a result.

5. *Methods and design to save materials.* Product design and production methods which made short materials go a long way in wartime can be applied in peace to cut the materials bills right from the start. Precision casting by the "lost wax" process, powder metallurgy, new tricks in metal stamping, and fabrication by welding are just a few waste-saving methods.

6. *Tighter inspection and quality control.* Military specifications have made close inspection of incoming materials, parts, and work in process an indispensable part of production. Here is an important place to stop materials waste in peacetime. Women have proved themselves to be better than men on certain types of inspection work, and this may be one of the jobs where choice of women workers will keep costs down.

7. *Salvaging to make money.* War-time shortages have produced methods for collecting scrap, segregating it to get full values, cleaning and packing it at low cost. Many of these steps can be widely applied to make left-over materials contribute to revenue.

8. *New methods to choose from.* The impact of war on production methods has resulted in new techniques in forging and casting, heat-treating, infra-red drying, high-frequency heating, low-temperature processing, etc. Some are extensions of previously used methods; some are really new; both offer many opportunities for wider application.

9. *Teamwork to find better methods.* Petty differences and departmental jealousies have been put aside in the interest of winning the war. This same teamwork can be harnessed to cutting costs. The Kellogg Division of Ameri-

can Brake Shoe, for example, has been holding regular meetings of engineers, superintendents and supervisors under the plant manager. So far these meetings have resulted in finding 14 better methods for producing just one product—each method a time- and money-saver of importance.

10. *New equipment on the way.* If you haven't placed orders for new special machinery, or explored new machine tools to come, this may be the last chance to catch up with companies that have done so. For some time, builders of special machinery have been busy for alert clients and will soon have cost-cutting machines ready for delivery. Not only tools but new types of controls as well—hydraulic, pneumatic and electrical—will be available.

11. *Bargains in war equipment.* Slightly used war tools soon to come on the market may offer a rare opportunity to buy standard machine tools at low prices, further to insure bringing plant equipment up to maximum efficiency. This is also the time to look for opportunities to dispose of old or outdated machines. A number of companies are watching the export market as an outlet for equipment that is still usable but will not measure up to competitive standards in this country. One place to start buying and selling may be between a company and its subcontractors.

12. *New employee-selection methods.* Aptitude testing and streamlined screening tests have been developed in war into effective selection and placement tools. They show real promise for the future. Several companies are already taking inventory of employees to learn what skills are at hand and how to make the most efficient use of human assets.

13. *Fast training methods to improve worker efficiency.* The training

programs which have been developed in wartime when labor turnover is high will pay even bigger dividends on the far more stable peacetime labor force. The fast-growing use of movies in industrial training, for example, offers peacetime opportunity affecting costs.

14. *More "care and feeding" of workers.* In order to keep war workers on the job and maintain their productivity, companies have installed plans for employee recreation, improved diet, closer medical supervision and care. Many of these new wrinkles in employee welfare can serve in peace to stabilize employment, increase productivity, and so cut costs.

15. *Making cost-cutting attractive.* Alert companies are now planning to keep wartime suggestion systems on the job for cost-cutting ideas. They intend to make the rewards fully in keeping with the value of the ideas and are taking steps to see that lower costs make sense to employees.

16. *Production planning to cut idle time.* Many plants learned in war what good production planning can do to increase output and to cut down on idle time for machines or workers. These controls, whether for scheduling machine time or for planning over-all operations, can be used postwar to cut costs.

17. *Bringing down factory overhead.* War has shown that enthusiastic, well-trained supervisors can help lower costs by focusing on increased output per man. Incentives for beating the budget help to make them cost-minded. Methods for saving fuel, improving lighting, controlling noise and vibration, keeping equipment clean, controlling dust and fumes have been improved.

18. *Better, cheaper packing methods.* The wartime emphasis has been on packing to insure safe arrival, to

save lumber, paper and other materials, to conserve shipping space. Less container weight, less space needed, greater assurance of safe transit, are all cost-cutters. The improved methods will cut damage losses and reduce shipping bills and will increase customer good will because fewer damaged shipments will need to be returned.

19. *Cutting costs of financing.* Forecasts of capital needs for postwar will show that some companies can get along with much less money and thus can cut interest charges. For details of guaranteed reconversion loans, keep in touch with your banker. Loans now available must be negotiated before, not after, termination of contracts.

20. *Better tax planning.* If excess profits taxes have loosened controls over costs, they have at the same time served to make industry more tax-conscious. Close attention to tax calendars and accurate tax budgeting can save many dollars in excess payments

or penalties for delays. And excess profits taxes themselves provide many opportunities for keeping more cash in the business. These, of course, involve highly technical calculations, requiring expert tax counsel in or out of the company.

21. *New slant on distribution.* From now on sales managers will be expected to produce customers at less cost; unit selling cost now becomes the target to shoot at. Wrigley, for example, has already indicated plans to decentralize plant facilities, increasing chewing-gum production costs slightly to gain a big savings in distribution.

22. *Cutting the cost of not being ready—of not planning ahead.* One move to get ready for reconversion is to line up suppliers now, to get tentative delivery dates, to avoid suppliers who may be seriously jammed up when your need is greatest.

Modern Industry, October 15, 1944, p. 48:11.

Look Out for Time-Inflation!

WE HEAR much about the danger of inflation. Nobody likes to think that a dollar he salted away when it would buy a fairly good necktie might have to be spent when it would be good for only a pair of shoestrings.

However, we can probably expect that, with characteristic American hope-to-itiveness, plus sound fiscal management, the nation can avoid any serious currency inflation. But there's another inflation threat that's always facing us as individuals. It's the danger of time-inflation. We don't hear so much about that; but it's too many hours that are worth nickels, when they should be worth dollars, that keep people poor.

What's the nature of inflated time? A few short case histories should provide some illustrations:

There's "Morning-paper Mike," who usually spends the first 15 minutes of his daily company time reading the newspaper. It's well to know what's going on the world, and 15 minutes with a newspaper can be time well spent. But Mike is using productive time for non-productive purposes. In a year, if he works a five-day week, with two weeks' vacation and eight holidays, he inflates about a week and a half of his productive time. A good man can produce a substantial amount of work in a week and a half.

An equal amount of time is inflated,

and to less purpose, by "Preparatory Pete," who customarily begins to straighten up his desk and make ready to go home a quarter of an hour before quitting time. The closing whistle, unlike some of his opportunities for advancement, seldom finds him unprepared.

If Pete concludes a piece of work anywhere near quitting time, he's through for the day. Not enough time to complete another job, he says. But he could at least begin the next job and realize on the time-investment through its quicker completion the following day.

"Overtime Oscar" is the opposite of "Preparatory Pete." He usually stays long after quitting time, often going home to find the pork chops cold and leathery and the wife hot and bothered. The trouble with Oscar is that he doesn't know how to organize his time. If he did, he wouldn't be content with being able to complete his work by staying all hours unless he'd first done all he could to make his allotted time on the job as productive as possible.

Oscar is likely to carry his overtime habit to bed with him and come to work late mornings. If anyone objects, he reminds the objector of the huge amount of overtime he puts in. Imagine a ballplayer showing up for work during the third inning and offering to atone for his tardiness by staying an hour after the game! Organized business, like some sports, requires organized teamwork, and the most valuable workers are those who are habitually on hand with the rest of the "team" while the game is on.

Closely akin to Oscar is "Briefcase Bill," who's addicted to carrying work home from the office. This, like other good things, can be overdone. With Bill, it has become an escape mecha-

nism. When he finds that a particular piece of work requires some mental struggle, he pops the papers into his briefcase. Thus he is relieved of worry about the job until evening; and if he should then feel indisposed, or there's a radio program he wants to hear, or some friends drop in for a gin-rummy session, the same old escape mechanism is ready to hand. The convenient briefcase waits to take his little headache again into protective custody. Some day he may complete the job, but not without having inflated considerable time.

Another time-inflater is "Gabby Gus," who's not content to talk business with his business visitors and co-workers during office hours but must round out each conversation by swapping stories, giving an eye-witness account of last Sunday's double-header, or explaining who's to be the next President and why. He inflates the time of his visitors and associates as well as his own.

There's also "Conference Clarence," who lives in fear that some day some caller will walk right into his office without having to wait. This, he feels, would somehow cause him to lose face. So the word's always out that he's in conference. The caller must inflate a lot of time in the anteroom and, when finally admitted, may not have enough time to state his proposition completely; and Clarence is the loser for not learning all the visitor has to say.

Here are four simple, general rules for preventing time-inflation:

1. Assign yourself a definite amount of productive time each day, and keep it productive. It needn't be limited to, but should always include, the regular working hours on your job.
2. Remember that all time is not

equally valuable. If you must complete a job tomorrow, one hour spent working on it today is better for that purpose than 10 years beginning the day after tomorrow.

3. Take time to organize your time. This calls for the daily planning of

a full calendar, with the most important work listed at the top.

4. Always have a lively sense of the importance of time—your own time and that of others.

By HERBERT GAY SISON. *Forbes*, September 15, 1944, p. 24:1.

Office Management

Transferring of Records

THE annual transferring of records which is customary at the end of the fiscal year in most business offices can be simplified if the office manager or file supervisor will take certain preliminary steps. The procedure outlined below will assure unbroken service from the files at the time of transfer, eliminate confusion, and prevent the accumulation of unfiled papers at the end of the fiscal period.

In order of their bulk, these are the common records usually included in the transfer problem: (a) correspondence; (b) orders; (c) purchase orders; (d) requisitions; (e) invoices; (f) ledger sheets; (g) checks. This order may continue the same, year after year. It is the component parts which change, requiring not only careful redistribution but also revised indexing. Last year's index is no more useful than last year's budget. The index must keep pace with such changes as the addition of new customers; small customers' becoming large customers, and vice versa; changes in requirements for special name guides, chronological folders, and individual folders. The preliminary job, step by step, is as follows:

1. Determine and tabulate by num-

ber of inches the amount of material which can be destroyed.

2. Remove this material from the old files or transfer cases.

3. Rearrange the transfer files in such a way as to provide empty drawer space within the immediate proximity of the next year's current files.

4. Compile a list of names for which folders or folder labels must be prepared.

5. Indicate on this list the names which are most active, so that special name guides and chronological folders in the proper size may be obtained.

6. Determine the number of folders needed, both individual and chronological.

7. Place order for labels, folders and other supplies 60 to 90 days before they are to be used.

8. Type the labels on rolls or pads and keep them in alphabetical order so they will be easy to locate when needed.

9. Apply the labels to the folders and place in cartons in front of the miscellaneous folders in the same order as they will be placed in the active file.

10. On transfer day merely remove what has been current material to its new location and place the newly pre-

pared material in the space provided for the current files.

If followed exactly, this method will make it possible to handle in one day the bulk of work entailed in the actual transfer of records.

Here is a list of the most common conditions indicative of poor filing technique, with suggested remedies:

1. Overcrowded individual folders. *Solution:* Use chronological folders of the proper subdivisions, allowing 20 to 25 papers per folder.

2. Overcrowded miscellaneous folders. *Solution:* Sort and re-file, using larger subdivisions or more individual folders.

3. Too many folders behind a guide. *Solution:* Use a larger number of subdivision guides, or a special name guide if the folders behind any one guide start with a name common to the locality.

4. Folder tabs not visible. *Solution:* Change to a tab-height folder in which the tab will project above the body of the guide.

5. Guide tabs in five positions. *Solution:* Restrict guide tabs to one or two positions so that special name guides and folder tabs will have a visible position of their own.

6. Special name guides followed by bulky folders. *Solution:* Use chronological folders in the proper size subdivision. This can be determined by allowing 20 to 25 papers to a folder.

7. Bundles of papers that cover one subject making an awkward bulk because they are kept intact. *Solution:* Place papers in a pressboard or binder folder.

8. Uneven alignment because of bulky fasteners at one end of folders. *Solution:* When binder folders are used, have fasteners alternating right and left end of folders.

9. Torn and ragged folders. *Solution:* Substitute better grade of folder, or use double top folders.

10. Soiled or unprotected labels in the guides. *Solution:* Set up new labels in celluloid windows.

11. Delays caused by lack of ease and familiarity in handling files of preceding year when they are unusually active. *Solution:* Establish an index to be used in connection with preceding year's files.

12. Confusion in operation of subject file. *Solution:* Set up a system of cross-reference sheets.

13. Delay and confusion caused by haphazard removal of papers from file and failure to return them. *Solution:* Set up a requisition record with requisition slips.

14. Confusion between current material and transferred records. *Solution:* Change the color of the labels each year.

15. Delays caused by necessity of consulting two indexes to determine whether desired folder is in correspondence or order drawer. *Solution:* Set up one index for both types of record, using different colors to correspond with the labels used to indicate the two types of material.

By L. R. ADDINGTON. *The Office Economist*, Vol. XXVII, No. 1, 1945, p. 6:3.

Guard Those You Love—Give to Conquer Cancer

Readjustment of Office Layout

IN MANY instances, office layout has gotten out of control during these days of wartime expansion. Grouping of related activities has been found impossible because of lack of space where expansion of activity has occurred; planning standards have been forgotten because department heads have left the problem of office layout adjustment to section heads. Here are two ways of bringing space and layout factors into line:

Desk layouts: When section heads are permitted to solve their own office layout problems without any consideration of over-all office planning control, groups of desks often assume individual formations which may appear to be more space-saving than a planned layout. Analysis will show, however, that the average number of square feet taken up per person is greater than with a more scientifically planned layout.

Standard distances for the spacing of desk and chair units, from back of desk to back of desk, range from five feet six inches to eight feet, and the arrangements for desks end-wise vary from individual desks with aisles between them to six and sometimes as many as eight desks in a row.

It is suggested that you study the desk arrangement in your office, and if it is proving inadequate for current purposes you can quickly determine whether the additional space needed can be made available by simply adjusting your over-all desk arrangement to a more standardized office layout plan.

File layouts: Another source of needed office space is a readjustment of office files. Concentrations of filing cabinets usually fall into three categories: active, semi-active and dead. The dead files should be removed from active office space to storage-type space, and stored in transfer cases. The semi-active files can be stacked double-decked, with aisles approximately 30 inches wide.

Assuming that the dead files and semi-active files have been taken care of, the active files and the four-drawer cabinets offer the best opportunities for acquiring needed space. Active files are usually laid out back to back with aisle widths varying anywhere from 30 inches to four feet, but today the tendency is to cut aisle widths to 30 inches. A study of your office plan will soon disclose the number of square feet of space to be gained here.

—KENNETH RIPNEN in *Office Equipment Digest* 2/45

Company Telephone Policy

USE and abuse of the telephone was the subject of a recent questionnaire survey made by the Office Management Association of Chicago. Information regarding company practices was received from 45 offices in the Chicago area.

Of the 45 respondents, 39 have a dial telephone system. Only 18 offices maintain a separate interdepartmental communication system.

Switchboard operators have rest periods during the day in 43 of the 45 reporting offices. In 24 offices the switchboard operator acts as receptionist, and in 20 offices she performs some clerical work.

In 33 offices, company telephones may be used for other than business calls. Of these, 12 companies provide pay telephones for employees' personal use, while 21 do not. Ten restrict company telephones to business calls, while two offices did not reply to this question. Of the 10 companies not permitting personal calls on company telephones, eight provide pay telephones for their employees and two do not.

Twenty-eight of the 45 reporting offices impose limitations on the use of telephones for long-distance calls. Nine require written approvals for making such calls, and one requires verbal approval.

Only one office indicated that outgoing calls were scheduled to reduce peak loads. In 20 offices the switchboard operator gets the outside number for the person who wishes to make the call.

Manuals on good telephone usage are employed by 16 out of 44 reporting on this question. In 20 out of 42 reporting offices, employees are trained in good telephone usage.

Only seven companies have had their switchboard operators prepare a list of "abuses" or "pet peeves." Six of the seven offices have been able to use these lists for improving telephone etiquette among other employees.

Personnel Administration Looks Ahead

WHAT changes are likely in personnel administration in the era ahead?

Let us confine that era to a period of six years—or, specifically, until the summer of 1950. This particular period is chosen because it probably embraces both the end of our war economy and a sufficient number of years of normal business to bring out some important trends. Naturally, changes occur in personnel administration as a result of changes in business, legislation and unionism, so it may be well to consider some of these factors briefly before taking up the subject under discussion.

PROBABLE CHANGES IN LEGISLATION

Additional legislation may be expected soon after the war to assure employment opportunities for returning servicemen and especially to provide for the rehabilitation and reemployment of handicapped veterans. Industry will be surveyed for every possible occupation wherein the handicapped may work.

A complete revision of all wage and salary stabilization legislation is likely. This will provide for enforcement by the Wage and Hour Division, instead of the War Labor Board, of all wage matters, while the Treasury department will continue enforcement of salary regulations.

We can expect new legislation regarding discriminatory employment. This will continue the policy of terming discrimination as to race, color or creed an unfair labor practice, despite the present cries that such legislation

limits the freedom of enterprise. The new laws will, in addition, have teeth in them.

One of the legislative changes in prospect is a tightening of the Wagner Act to guarantee greater protection of union members, employers and the public. Legislation is necessary to assure members of unions:

1. That dues and initiation fees will be reasonable.
2. That all unions will have fair admission policies; no discrimination as to race, color or creed; fair apprenticeship regulations; and no restricted memberships.
3. That there will be fair and regular elections of officers who must be citizens of good character.
4. That unions will administer their affairs efficiently and democratically, and publish audited financial reports.
5. That all unions will have judicial machinery within their organizations to provide review of union disciplinary actions, such as fines, suspensions and revocations of charters.

Legislation is necessary to equalize responsibility under the Wagner Act for the protection of employers. This legislation should provide for:

1. Freedom from jurisdictional disputes.
2. The making of minority strikes illegal.
3. A guarantee of peaceful settlement of all disputes.
4. The making of production restrictions of all kinds illegal.
5. Responsibility on the part of unions for their actions.

Legislation is also essential to protect the public. This should provide for:

1. Democratic unionism.
2. Responsibility on the part of unions.
3. Freedom from costly strikes.
4. Unionism which helps all classes of working people.
5. Highest possible production.
6. Public disclosure of all union political expenditures.

We can expect legislation to integrate all federal adjustment machinery. This means the appointment of a single government agency to carry out the terms of all legislation concerning union-management problems, including:

1. Employee elections.
2. Union certifications.
3. Conciliation.
4. Arbitration.
5. "Cooling-off" periods before strikes or lockouts.
6. Legislation against strikes in those essential services which affect the public health or protection.
7. Legislation limiting strikes in essential services where such strikes greatly inconvenience the public even though they do not affect public health or protection.
8. Legislation subjecting unions to common-law suits and making them answerable for damages to their members, private citizens, employers or the public.

Soon after the war we shall note greater governmental control over the health and safety of workers. In addition, we shall see an increase in demands for social insurance legislation to provide:

1. Increased unemployment benefits.
2. Retirement benefits.
3. Reductions in retirement ages.
4. Hospitalization benefits.
5. Pregnancy benefits.
6. Health and accident benefits.

PROBABLE CHANGES IN UNIONISM

Another important factor which necessitates changes in personnel administration is unionism. The end of the war will bring about severe curtailment of employment in many industries now employing large numbers of union members, such as shipyards, airplane and munitions plants, etc. This, along with reconversion's inevitable unemployment, will create a temporary decrease of roughly 50 per cent in total union membership. As a result, in the period following the war we can ex-

pect intensification of the organizational activities of unions. They will do all they can to rebuild their memberships. Drives will be launched on the few industries which have not as yet been touched, and attempts will be made to organize other industries 100 per cent. Campaigns to unionize foremen and office workers will be common. Unions will not be able to maintain their large programs, started during the war, without additional members; and they will stop at nothing to get them. Increased inter- and intra-union disputes can be expected in this fight for more dues. Add to this the pent-up feelings of both management and unions caused by the restrictive legislation, Executive Orders, and War Labor Board decisions of the past few years. Only one possible outcome can be foreseen—a year or two of the bitterest labor strife we have ever witnessed.

Unions, in addition to fighting for members, will try hard to gain all the things they have been restricted from striking for during this emergency, such as increased wages, closed shops, longer paid vacations, and promotions based solely on seniority. Management, meanwhile, will try to recoup the losses it has sustained during the same period (e.g., maintenance of membership, time and one-half for the sixth day as such, and various management prerogatives). Management will try to hold its labor costs on a competitive basis as well as to increase the efficiency of labor.

PROBABLE CHANGES IN PERSONNEL ADMINISTRATION

During the reconversion and rebuilding period, a large number of so-called personnel departments will be eliminated. After the war there will be no bond drives, few labor-management

committees, less emphasis on absenteeism, no transportation problems, little use of the U. S. Employment Service in many sections, fewer reports on manpower to government agencies, and less government control of wages and salaries. The demand will be for production at competitive cost.

There will be intensified development of certain techniques, such as job evaluation for the establishment of wage and salary schedules; scientific selection procedures for the fitting of individuals (particularly supervisors) to specific jobs; merit rating plans for the appraisal of individual workers; training programs to assure that each worker and supervisor thoroughly understands the right way of doing his job.

Changes in legislation will tend to ease labor relations problems, since union responsibility under the Wagner Act will be increased. But labor strife, resulting from greater organizational activities by unions, will offset any improvements made in our present statutes.

The integration of federal adjustment machinery will provide some measure of relief in our relations with unions. Greater use of terminal points in contracts will be required, despite pleas from both management and labor to eliminate them. With this in mind, it will be well to clarify arbitration clauses. We must define those issues which may be arbitrated and those which management should never consent to arbitrate. Such limitations on arbitration must be written into labor contracts before we awaken to find many basic management decisions being made by a third party.

Personnel administrators will have

to find suitable jobs for the large number of handicapped people who will be among us after the war. Here is an opportunity for management to perform a constructive service to society.

Another challenge to personnel administrators in postwar will lie in the increased emphasis on protection of our human resources. There will be stricter regulations respecting plant sanitation, increased demand for accident prevention and safety education.

Next is the essential change which will occur to clarify line and staff responsibilities. Gradually line responsibilities will be transferred from staff groups, such as personnel departments, to the line officers—superintendents, overseers and foremen. These responsibilities will include final selection, the right to discipline and discharge, the right to transfer and promote, the authority to settle grievances, and the dissemination of information.

Last among the probable changes is the emergence of a much higher type of personnel administrator. Already there is some evidence of this in top management circles. Some companies have elected an outstanding personnel administrator to the board of directors or vice presidency so that they may have the benefit of his experience and knowledge in making decisions. Just as we have specialists in accounting, finance, law, engineering, personnel administrators will be specialists in the handling of people. As a result of this transition, we may expect greater professionalism in the field of personnel administration.

From an address by Guy B. Arthur, Jr., before the Southern Conference on Human Relations in Industry.

- THIRTY-NINE questions that may arise when interviewing returning veterans are answered in a booklet, *Interview of the Returning Serviceman*, recently distributed to the supervisory staff of Chicago, Burlington & Quincy Railroad Company.

Employment and Wage Guarantees in Union Agreements

TO AN increasing extent, unions are seeking job security for their members through the inclusion of employment or wage guarantees in their contracts with employers. The existing guarantee provisions in union agreements, limited as they are, represent a partial fulfillment of the workers' quest for job security; they may also indicate the beginning of a more general adoption of plans which will provide some measure of security to an increasing number of workers.

Approximately 42,500 workers out of 8,000,000 covered by employer-union agreements recently analyzed by the Bureau of Labor Statistics are protected by guaranteed employment or annual wage provisions. Most of these workers (approximately 30,000) are employed in the consumers' goods, service and distributive industries, where the agreements were negotiated with concerns employing relatively small numbers of workers. Although there are a few outstanding examples in manufacturing companies of considerable size, the total number of employees in manufacturing industries who are covered by agreements providing guaranteed employment is very small—about 12,500.

Broadly, the plans provided in current employer-union agreements are of two kinds: those guaranteeing employment and those guaranteeing annual wages. The employment guarantee plans specify that the employees will be provided with a year's job (or, in some cases, a job for a fraction of a year), with the total annual earnings left a variable. Under annual wage plans, the employee is guaranteed a weekly income throughout the year regardless of daily or seasonal fluctua-

tions in employment. The significant differences among the several plans have to do with the relative completeness of the guarantee, that is, how closely the guarantee comes to providing the equivalent of full employment at normal wages.

In some instances the regular weekly wage is assured for a given number of weeks and a proportion of wages (half pay) is guaranteed during all or a specified number of the remaining weeks. A number of plans guarantee a specified number of hours' or weeks' work a year. Under certain plans, full pay during weeks of less than full employment is compensated by extra work during peak seasons with no increase in the weekly pay during these overtime weeks; under others, the guaranteed wage represents a minimum to which overtime is added when worked. Somewhat similar to a guaranteed wage plan is the wage advance arrangement whereby an employer makes a cash loan to eligible workers in "short" weeks to bring their wages up to specified amounts, these advances being subsequently repaid by automatic deductions from wages earned during full-time or overtime weeks.

Plans differ not only with respect to the proportion of a year's normal income or work which is guaranteed, but also as to the provisions determining which employees or groups of employees shall benefit from the guarantees, and the conditions, if any, which relieve the employer of fulfilling the guarantee obligations. The most extended coverage in existing guarantee plans includes all "regular" or "permanent" employees or all those who have completed a probationary period, usually designated as six months.

Some of the plans covering the greatest number of employees include no qualifying clauses; the employer is obligated to fulfill the terms of the guarantee so long as the agreement is in effect, no matter what circumstances may develop. Others specifically revoke the guarantees in cases of bankruptcy or sale of the business or in emergencies beyond management's control. The contractual obligation under any plan included in a general employer-union agreement is necessarily limited to the effective period of such agreement.

Out of a total of about 6,500 agreements analyzed in manufacturing industries, covering over 6,000,000 workers, 132 provide some form of guaranteed employment or annual wage plan. These cover approximately 12,500 workers employed by 142 concerns. Eighty-eight of these companies, employing about 5,850 workers, guarantee a full year's employment or wages; the remaining 54 companies, employing about 6,500 workers, provide guarantees of less than one year. Unqualified year-round guarantees to all or most workers in the plant are provided in only a few agreements, but these cover some of the largest companies having guarantee provisions. Most of the guarantee provisions, both for year-round or lesser periods, have qualifications which allow cancellation or modification under specified circumstances and which extend the guarantee to only a limited number of employees—that is, those on specified occupations; those in the company's employ at the time the agreement was signed; a specified number; or employees with a specified period of service.

Most of the employment or wage guarantees in manufacturing industries are incorporated in one-year agree-

ments, although one assures minimum annual wages for five years, subject to certain limitations involving the employer's financial ability. One plan included in uniform agreements separately signed by 58 companies in the textile dyeing and finishing industry is effective for approximately 2½ years.

Under the agreements analyzed, annual wage guarantees for all or virtually all the company's employees are provided by individual companies engaged in the meat-packing, shoe, dairy and leather product industries; limited groups of workers in the textile, printing, finishing and dyeing, ladies' apparel, grain milling, and ice industries are similarly covered.

Six of the eight manufacturing agreements which extend annual wage or employment guarantees to virtually all plant employees have no qualifying clauses permitting modification or cancellation during the life of the agreements. Two of these cover approximately 4,000 workers employed by a meat-packing company; two others cover about 1,000 shoe workers; and two cover about 100 workers employed by dairy and hardware companies. One of the latter, an agreement with a small dairy firm in Wisconsin, pledges the employer to "maintain such weekly hours as will best serve its regular personnel maximum and continuous employment; such hours to average 50 per week over a one-year period . . ." with time and one-half for work over 40 hours in any one week. "Regular personnel" include those who have completed a 300-hour probationary period. The two agreements in which the guarantees are modified by certain limitations determine the company's obligations according to the types of work performed by the employees and length of service.

Under 69 of the 132 manufacturing agreements providing continuous annual employment or a minimum annual wage, the guarantees are limited to a specified number of the plants' employees or to those engaged in particular occupations. About 500 workers, employed by 82 different firms, are covered by these guarantees. In 10 of these agreements the guarantee is unqualified, but in the remaining 59 the guarantee is subject to cancellation or modification in emergencies.

In the non-manufacturing industries, about 30,000 out of an estimated 2,000,000 workers under the agreements included in this study are protected by some form of employment or wage guarantee. Over 90 per cent of these workers receive year-round guarantees, while the others are assured employment or wages for periods of less than one year.

Most of these guarantee plans cover persons employed in retail and wholesale trade, chiefly in New York City. Others cover workers in service indus-

tries and in maintenance work, public utilities and social services. Because of the nature of the industries involved, the normal size of establishment which these agreements cover is very small. In addition, the guarantee most frequently covers only a portion of the working staff—a "basic crew" decided upon at the time the agreement was negotiated.

A majority of the non-manufacturing agreements which contain guarantees are in effect for two years, though in one instance the agreement is effective for three years. Most of them are voidable under certain specified conditions, such as liquidation of business, "material decrease in revenue," "conditions arising out of the national emergency," unforeseeable catastrophe," etc. Under a few plans, dismissal pay is granted employees laid off.

From *Guaranteed-Employment and Annual-Wage Provisions in Union Agreements*, Bureau of Labor Statistics, U. S. Department of Labor, March, 1945, 36 pages.

AMA WOULD LIKE A COPY OF YOUR UNION CONTRACT

For the purpose of developing a pool of information on collective bargaining, AMA is seeking to increase its collection of union contracts, and will be grateful to all companies which will cooperate by filing copies of their union agreements with the Association. It will be especially appreciated if contracts containing new and unusual types of clauses are brought to the Association's attention.

In any use which is made of this material, names of companies or unions involved will not be mentioned. Copies should be addressed: Editor, American Management Association, 330 West 42nd Street, New York 18, N. Y.

Preparing for Postwar Personnel Relations

NO ONE can accurately foresee the future of personnel administration, but some appreciation of the nature of employee problems after the war can be gained from an appraisal of recent developments. Progressive management will attempt to gauge the effect of these developments in shaping its postwar policies. Important wartime developments in the field—all of which bear on the future—include:

(1) Changes in community, state and even regional concentrations of many skills due to movement of workers to war industry areas.

(2) Development of new private and public recruiting practices which have created increased labor mobility.

(3) Employment in sizable numbers of new worker groups—women, minors and older people.

(4) Introduction of many new and more effective methods of selecting workers.

(5) Wider use of training programs and development of new training techniques.

(6) Changes in processing methods to allow jobs traditionally handled by men or skilled craftsmen to be performed by women or semi-skilled employees.

(7) Development of upgrading policies and procedures.

(8) Substantial increases in gross wages as a result of reclassification of jobs, upgrading, wage increases, and increased hours.

(9) Lengthening of shifts and workweeks.

(10) Government control of wages, of labor supply (in some areas), and of certain disputed clauses in labor contracts, all causing a damming-up of grievances.

(11) Use of patriotic appeals to increase production and minimize labor trouble during the emergency.

(12) Deterioration of employer-employee relations due to a combination of war-bred economic and social disruptions.

(13) Disassociation of what may be as many as 12,000,000 people from peacetime pursuits.

While it cannot be foretold just how these developments will shape the future, an appreciation of the nature and complexity of the personnel administration job in the postwar period will lend realism to the plans which are designed to carry it through.

The area of labor supply presents business with a whole series of difficult postwar problems. New geographic concentrations of skills affect such important decisions as plant location, sources of supply, and markets, and will influence growth and activity of unions. The assimilation of millions of men from service at a time when job opportunities are decreasing, or at least undergoing readjustment, confronts business with a personnel management task of gigantic proportions.

The effect of increased worker specialization upon the problems of converting to civilian activity must be gauged in advance. Decisions about future methods of job breakdowns and personnel allocations require careful planning, since they affect many other important personnel practices. Increased use of automatic machines and of other devices, made possible during the war by relaxed employee resistance, poses difficult and far-reaching personnel problems relating to future introduction of technical improvements.

Future problems of wages and hours will be no less difficult. New classifica-

tion procedures for jobs and workers must be expanded to accomplish smoothly the downgrading which will be necessary. The many causes of high wartime wages will call for close scrutiny as the protection of government contracts gives way to open cost competition. Length and number of work shifts will be determined by sales volume rather than by productive capacity.

Postwar labor problems will be further complicated by the growth of unions whose membership has reached new high levels. Wartime restrictions, particularly of the right to strike, have hampered many normal union activities and dammed up union demands. Union war chests have been swollen by the war, and plans are developing for campaigns to widen union recognition, obtain greater employee security, and increase participation in establishing employment conditions.

Government control of personnel relations will have been extended further than at any other time in our history. The timing and extent of relaxation of these controls will greatly affect management's ability to handle postwar labor relations successfully. The way government contracts are terminated and the amounts due to contract holders are paid will affect the individual concern's financial position, its switch to peacetime activities, and, quite clearly, its employment status and bargaining position.

What specifically can business do now to prepare for employee problems of the future? The answer lies in giving immediate and careful attention to the relatively few fundamental principles of employee relations. Selection, placement, training, transfer, promotion and demotion, hours, compensation, separation, incentives, grievance adjustment, safety, financial security, stabilization of employment, and labor-

management cooperation on all these matters can be reviewed now and welded together into a basic personnel policy to be expanded or altered by a change of emphasis to whatever conditions exist after the war. These principles will constitute the skeleton of personnel administration under any foreseeable conditions.

The key to industrial relations is the reasonable and mutually acceptable handling of day-to-day problems affecting individuals and groups. Evidence is strong, however, that business men, as judged by the results of their actions, do not realize the importance of day-to-day administration of employee relations. It has been demonstrated time and again that even a weak personnel policy, well administered, can be marked by some degree of success. On the other hand, good personnel policies remain ineffective, are only partly effective, or die, simply because of neglect. Management has yet to appreciate fully that personnel *administration* is exactly that—the making of basic personnel policies effective through *administrative policies and procedures* or, to put it more significantly, through an *administrative point of view*.

What can business do now to prepare to deal more administratively with labor relations after the war? First, top management can and must give its support not only in the formulation of personnel policies but in their execution. There is need of a full appreciation that administration of personnel, as a factor determining the success or failure of the business, ranks as high as does the administration of such other functions as production, finance, marketing and purchasing. The administrative procedures for the handling of personnel transactions must, if the job is to be done correctly, be as definite and businesslike and as well understood

by everyone concerned as are the procedures for other business functions.

The *financial* aspects of the personnel program should be studied in preparation for the future responsibilities of the personnel department. Sound administration of personnel involves expense, but personnel directors' pleas for more funds too frequently are of little avail because management is reluctant to invest in such intangibles as "more efficiency," "less turnover" or "better morale." Willing to invest in bricks, mortar or machines, management hesitates to pay for the program by which such things can be made more productive. Alert managements will see the fallacy of such an attitude. The value of efficiency records, turnover experience, and the like can be reduced to dollars and cents to a far greater extent than previously, in order to prove the need for funds required for the effective conduct of industrial relations.

In view of the personnel management job ahead of them, business can ill afford to neglect the problems of se-

lecting and training the people required to staff the personnel department. What is needed is a careful selection process involving the consideration of experience, aptitude and ability in relation to the requirements of the job. If anything like the required ability is to be secured and held in the personnel department, business must offer to the members of the personnel staff the opportunity for an attractive career. Personnel directors themselves are likely to become personnel problems as they fail to receive advancement in compensation and recognition.

If management will take a thoughtful, constructive look at past developments and future uncertainties of labor relations, it will act now to establish a basic personnel program and the means for making it effective and, by so doing, prepare its organization for one of the most critical problems of the postwar years. BY VIGO C. NIELSEN. *Harvard Business Review*, Winter, 1944, p. 239:10.

Strikes in Britain and America in 1944

ALTHOUGH the year 1944 witnessed the largest number of strikes in the United States for any year since statistics were compiled in 1916, figures for Great Britain, in relation to industrial population, show an equally great incidence of strikes in 1944 despite the fact that strikes are prohibited in Great Britain during the war. The actual number of strikes in Great Britain was less than the number in the United States by approximately the same proportion as industrial employment in Britain falls below that in the United States.

A second point of similarity is the fact that time lost due to strikes in both countries is roughly equal when allowance is made for the difference in industrial population. The strike idleness figure for the United States in 1944 was substantially lower than in many recent years despite the high number of strikes. For Great Britain, however, the figure for strike idleness was substantially higher than in previous years.

The number of workers in industrial employment in Great Britain during 1945 was 43.5 per cent of the number so employed in the United States. The number of strikes occurring in Great Britain was 43.7 per cent of the number occurring in the United States. Workers involved in strikes in Great Britain totaled 39.0 per cent of the number involved in this country. Man-days of strike idleness in Great Britain totaled 43.6 per cent of the man-days lost due to strikes in the United States.

When correction is made for the difference in total industrial employment in the two countries, the corresponding figures on number of strikes and man-days lost are almost equal. Since relatively fewer British workers were involved, however, it may be concluded that strikes in England were, in general, of longer duration.

—*Labor Relations Reporter* 3/26/45

Sick-Leave Provisions

IN RECENT YEARS organized labor has attempted to obtain provisions for sick leave with pay in agreements negotiated with employers. The number of such provisions is still very small, but they have been appearing more frequently in recent years.

In California a labor questionnaire was completed in 1943 by 1,621 union locals. Of this number, 1,195 reported that they had collective bargaining agreements with employers. Eighty-six of the 1,195 reported that one or more of their contracts included sick-leave-with-pay provisions. The most common plan reported is of the uniform type in which a fixed number of days of sick leave are permitted after a specified minimum term of employment. Forty-one of the 66 plans which were reported in detail are of this type. The remaining plans have sick benefits graduated by length of service.

The amount of sick-leave allowance per year in 39 of the 41 uniform plans reported is as follows:

Number of Plans	Annual Sick Leave
2.....	3 days
11.....	5 days
5.....	6 days
3.....	1 week
1.....	56 hours
5.....	10 days
2.....	12 days
5.....	2 weeks
4.....	15 days
1.....	4 weeks

Of the 25 union locals reporting plans with graduated sick leave with pay, 15 locals, all affiliates of the same international union, include a plan in their agreements which allows six days of sick leave after one year of service, nine days after two years of employment, and a maximum of 12 days after three years. This plan specifies that sick leave with pay will be granted only on the condition that "work is kept up at no additional expense to the company." The provisions of the remainder of the graduated plans were all different. The minimum ranged from five days of sick leave to two weeks, and the maximum from 10 days to 60 days.

—The Conference Board Management Record 2/45

Federal Opportunities in Administration and Management

THE Civil Service Commission has announced opportunities in the following fields: administration, personnel management, budget administration, administrative analysis, and information. Most positions to be filled from the examinations are in Washington, D. C., with only a few in other parts of the country and abroad.

Administrative and Executive Officers (\$5,228 to \$8,628 a year) are wanted to assist in the direction of various government activities, including the disposal of surplus property and the renegotiation of contracts.

Position Classifiers, Placement Officers, and Personnel Assistants (\$3,163 to \$6,228 a year) are needed for jobs in the personnel management programs of federal agencies.

Budget Officers and Budget Analysts (\$3,163 to \$7,128 a year): Persons with experience in the fields of budget administration or administrative analysis are invited to apply for these positions.

Director of Information and Information Specialist (\$3,163 to \$7,128 a year): Experience in one of the following fields of information is required: (1) press and publications; (2) visual presentation; (3) radio; or (4) advertising.

Most vacancies to be filled in all fields are in the lower-salaried positions. No written test is required, and there are no age limits. Persons now using their highest skills in war work should not apply. Federal appointments are made in accordance with WMC policies and employment stabilization programs.

Ask at any first- or second-class post office for copies of announcements 353, 354, 356 and 357, and application Form 57. Applications must be filed with the U. S. Civil Service Commission, Washington 25, D. C.

Production Management

Introducing Modern Quality Control Techniques

THE APPLICATION of modern quality control techniques necessitates a recognition by top management of the existence and importance of the inspection function. Where there is no formal recognition of the inspection function, an informal recognition is inevitably present. The nature and extent of this can be established by a shop survey. The shop survey is always bound to disclose the defects of an unorganized function, and plans for organization of the function thereupon suggest themselves.

The recognition of the inspection function logically urges sound organization of the function, and this is a most important stride forward. But today even a soundly organized inspection department is behind the times if it uses only rule-of-thumb techniques and otherwise fails to exploit the present state of the art. However, securing adoption of this new state of the art is itself an art, for a complete acceptance of the new techniques involves a major change in the habits of the plant in general, and of the inspection department in particular.

This change will not come about merely because the engineer is sincerely convinced that it is a good thing. It can come about only if a whole series of people are convinced—top management, the shop executives, and the shop men themselves.

In a plant of any size these groups are numerous, and it is hopeless to endeavor to gain acceptance of the new methods by teaching the entire supervisory body or by mass application in the entire shop. The experienced engineer will never undertake so formid-

able a task all at once. Instead, he will concentrate on a single production line or on a small area of the shop. He will then so conduct his studies and produce results so obvious that supervisors in other areas will come to him urging that they be next.

In a plant of any size some of the supervisors are inevitably venturesome and inquisitive. Among this small group will be found the sympathy and even the eagerness to try out new methods and procedures. The engineer should identify these men. His initial application of the new techniques should be in areas which they supervise.

Furthermore, the application must be handled in a way which, in effect, makes the engineer the helper, for the time being, of the supervisor in charge. It will not do for the word to get around that in Department A the new engineer is running the supervisor. Rather, it must be implied that the supervisor is experimenting with new methods and has brought in an engineer to help him with the technical phases of the problem. This may seem to be going to extreme niceties in defining who is who, yet the psychology of who is boss is often the dominant cause of success or failure.

The manner of reporting the accomplishments of the pilot installation is of equal importance. The wise engineer will avoid making a report to top management to the effect that he has accomplished certain results in Department A. Such a report will arouse resentment in the department and in other departments as well. It is far better that the report on accomplish-

ments go from the head of the department to top management, with an acknowledgment of the technical assistance rendered by the engineer. Such a report will encourage rather than discourage the other departments, and will in no way detract from the contribution of the engineer.

Once the pilot installation has proved successful, the way is open for broadening the undertaking. Top management will be encouraged by the initial results, and the shop supervisors will be much less apprehensive once they understand the experiences of the pioneer supervisor. The plan for extending the application to all appropriate areas must include four elements:

1. A survey of the plant inspection effort.
2. Launching of a plan for organizing to extend applications.
3. A training program.
4. Carrying out of the plan.

The survey of the plant inspection effort should include a reconnaissance to determine the nature and extent of the entire problem. This should include a rough count of the inspection hours, classified as to acceptance sampling, control sampling, operational sorting, and corrective sorting. Such a count can give an idea of what can be accomplished through use of scientific sampling.

The survey should also include a rough estimate of the shop losses arising from defective work, including both repairs and material losses. Such a study can give an idea of what can be accomplished by whatever means are necessary to minimize such losses.

The survey will disclose what parts of the problem should receive first attention. It may also disclose that some areas need no attention. In addition, the survey will give an idea of the magnitude of the job to be done, and

whether it warrants great effort or only limited effort.

Based on the results of the survey, a plan must be developed for broad application. This plan must set out the sequence in which the areas should be studied, the time required for each study, the engineering force required for installation and for subsequent maintenance, the associated shop effort required, and the anticipated results. The figures will of necessity be rough-hewn, but periodically the plan can be reviewed and the estimates brought up to date.

The shop executives must necessarily be a party to the formulation of the broad plan, for they have the prime responsibility for the effectiveness of the organizations involved. The conservatism of these line departments will frequently make a valuable contribution to the quality of the report submitted to top management.

The plan should include an appropriate training program, both for technical people and for shop men. Depending on size, each shop unit will need one or more men trained to understand what the new techniques and procedures are all about, to collect pertinent shop data, to inform the shop personnel about the new procedures, and otherwise to aid in the installations. On the technical side, one or more engineers will be required to conduct the shop training courses, to give technical advice, and to provide a ready source of reference for the numerous questions which arise when a new installation is made.

The manner of launching the program is an important detail. The launching should be made an occasion to emphasize the fact that the venture has top management support. This should be done by setting aside a day or two for an Inspection and Quality

Control Conference. The conference should be fully attended by those inspection officials, engineers and shop men who are to carry out the program. In addition, there should be present enough top plant officials and general officers of the company to leave no doubt in the minds of those present that the undertaking is fully sponsored.

The time of such a conference should be occupied by demonstrations, lectures and discussions. All this should be well organized in advance. Several heads of general departments should outline their needs for quality performance. Operating officials should recite some of their problems of inspection. Inspection officials should discuss the problems they encounter. Engineers should explain the nature and results of the pilot installation.

In addition to the serious sessions of the conference, arrangement should be made for informal luncheons and dinners. Such informal meetings are desirable to help generate a feeling of fellowship which is an indispensable part of any cooperative undertaking. A final dinner should be the occasion for an address by the senior company official present.

The program of quality control should not come as something surprising and mysterious to the shop men. They should know beforehand what the plan is all about and how it will affect them. This requires more than mere information; it requires training.

The training program must be conducted in language which the student can understand. More than this, the training material must be tailored to the needs of the students. Such tailoring involves use of the "exception principle." That is to say, each student should, as a matter of compulsion, be given only that minimum essential to

his participation. As to anything beyond this, nothing should be forced on the student. However, provision may well be made for encouraging extra training for those who wish to exceed the minimum.

There has been a strong tendency on the part of quality control engineers to teach mathematics to the shop men. In the author's experience, this tendency can endanger the success of the entire venture. The "minimum of essentials" for the shop men involves the common sense of the techniques, and the method of using them. To dwell on the mathematics behind them is confusing to the shop men and, in addition, operates to shift the emphasis to the wrong subject.

In a large organization, where the training may involve hundreds of supervisors and shop men, it is worth while to prepare formal text material. Great care should be exercised, in preparation of this material, to avoid any tendency to legalistic, theoretical or stilted phraseology. The text material should make use of all the devices known to command and hold attention—brevity, humor, illustration, and use of the concrete rather than the abstract. To overdignify the text material is to embalm it.

The selection of instructors is most difficult, for ideally these must possess a rare collection of qualities: enthusiasm for the subject matter, a sense of humor, patience and perseverance. But men approaching this ideal must be found if the undertaking is to get off to a good start.

To the greatest extent possible, the new techniques should be applied by the shop people themselves. The most enthusiastic acceptance is always that which stems from within.

It will always be found, however,

that the application of new techniques to a variety of work raises numerous questions of interpretation and of adaptation. Means must be provided to give assistance and even inspiration in such cases. Without this there is the risk that there will be no application because "my job is different."

A large part of the problem lies in making adaptations. This feature should be discussed in the training courses. The students should be encouraged to bring practical instances to the classroom for discussion by all. However, in the main, the handling of these applications calls for the advice of one or more trained engineers on the inspection staff.

The carrying out of the program requires also a periodic summary of results attained and a comparison of these with the original objective. If at

all possible, this should be prepared in a way which stimulates competition among the organizations involved, both against their objectives and against each other. However, in interpretation of the results of such competition, one should keep in mind the flexibility of the original estimates.

Those who carry out the plan must do so in terms of the objectives of the organization. A plant does not make a product to aid in applying inspection techniques. Rather, inspection techniques exist to aid the plant in making the product. Where the application of inspection techniques cannot aid in this basic objective, the application becomes only a useless ritual.

From *Management of Inspection and Quality Control*, by J. M. Juran (Harper & Brothers, New York, 1945).

Tool Conservation Is Good Business

TODAY and for some time to come it will be difficult to obtain any new shop tools, and even when they are obtainable much time will pass between the order and actual shipment. Tool conservation, therefore, has become of great importance in the "battle of production." This has been recognized by Westinghouse Electric & Manufacturing Co., and two main conclusions have been reached:

1. It is "good business" to get maximum life out of tools, not only because the "squeeze" is lessened on scarce raw materials but because maximum life cuts costs, relieves the current heavy burden of the tool manufacturers, and at the same time assists in maintaining production schedules.

2. It is also "good business" to teach workers how to use tools properly, so as to get the most out of them. It is recognized that bad habits in the use of tools are hard to break.

Among tools which offer good salvage and renewal possibilities are files, hammers, wrenches, power hacksaws, blades, mallets, welding apparatus, vises, blow-torches, gages, micrometers, hatchets, drills, cutters, taps and drill chucks. At Westinghouse, all tools requiring repair or renewal of parts are sent to one department which is closely allied with the toolroom. After reconditioning, they are returned to the department where they are used.

Everything possible is done to restore them to their original condition. This reconditioning consists of sandblasting, cleaning, polishing, painting, oiling, adjustment and replacement of such parts as may be necessary. The objective is to place in every worker's hands tools which are in the best possible condition, and it has been determined that the favorable psychological response on the part of the worker is much greater in the case of a renewed tool than would have been true if the tool had merely been repaired.

Workers are made conscious of the importance of tool conservation by posters and signs about the plant, especially near toolrooms. Foremen and toolroom attendants are taught the necessity for conserving tools, are advised when to turn them in for renewal, and are directed to pass on such information to all workers they contact.

—P. M. MATTHEWS and J. P. KEENAN in *American Machinist* 2/1/45

The Foreman and Time Study

By PHIL CARROLL, JR.*

FOR YEARS, enlightened managements have conducted supervisory and foremanship training courses. Recently, however, we have witnessed a phenomenal expansion of this educational effort in many plants. Why the sudden upsurge in interest?

Not all the increased emphasis on supervisory training can be imputed to the war production program. Some of it results from a rude awakening. We have found that the best operator frequently is not the type to assume supervisory responsibilities. We have learned that technical skill is not so essential to success in foremanship as managerial and leadership qualities.

By way of training, a surprising number of companies have instituted instructional courses in time study for their foremen. This is a logical approach. Only one better can be suggested, and that takes longer—but some day we may find that our foremen will be drawn from the time study department. That is not to say that a good time study man will make a good foreman. That might be like spoiling a good mechanic by making him a foreman. But when we select men for their skills and aptitudes as potential foremen and then give them time study training, we can expect that they will be basically cost-conscious and have some idea of managerial duties. Successful experience in time study work will do more to make a prospective foreman impartial in his judgments and management-minded in his thinking than all the "listening courses" we can give him. And, as a result, he would certainly know his responsibilities in wage incentive administration.

The foreman must have a good understanding of time study and wage incentives if he is to function properly in a plant where they are used. He should be able to answer the many questions which arise in day-to-day operation of incentive plans if he is to resolve so-called grievances while they are still in the complaint stage. He loses prestige if he must admit he does not know the right answers. He may pretend ignorance in order to "pass the buck," but in so doing he not only loses the respect of his men but delays the settlement of complaints.

Take, for example, the question of "Who should be timed?" This is of significance because in some plants tight standards have been set from time studies taken of fast operators. Except where due to management greed, these unfair standards have resulted from "selecting the operator" and from "averaging the timings." Selecting the operator to be timed creates industrial relations problems, and a foreman trained in sound time study principles would know better than to follow this practice. Besides, he would know that the "selecting" technique is employed principally by those who seek the "average operator." This is a poor substitute resorted to because the observers have not learned how to *rate* actual performance. Naturally, the times taken by a selected operator may be substantially different from fair, normal times. And then, if matters are made worse by "averaging the times," the whole error is reflected in the resulting "rate."

Almost every time study must be adjusted up or down to a normal per-

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formance by rating what is actually observed. Such adjustment cannot be made, for example, on the premise that "a little more time should be allowed" to correct a speedy performance to the right time "for an average operator." More than likely it might require that 20 to 50 per cent be added through applying a correct rating factor. Moreover, such rating factor would not attempt to adjust to the "average" but to a *normal* operator. The average is ever changing, whereas some constancy can be attributed to the normal operator.

Only well-trained persons, foremen or time study men, are capable of judging whether or not an operator is putting forth adequate effort. And effort varies considerably even during a single time study. How then is the typical foreman capable of overseeing so much of the time study man's work as some advocate?

In the first place, a foreman thoroughly familiar with time study would know that the chances are against arriving at a correct answer with a single time study. The performance itself is one big variable. There is also a likelihood of distortion arising from a study of only one set of conditions. Both these variables can be recognized and compensated for by combining many studies to compile standard data. With this, selecting, averaging and overseeing are superfluous.

With standard data, there is no need to bother the foreman to sign the time study. And a foreman trained in good time study methods would know that he does not need to sign a completed time study in order to assume his responsibilities in connection with it. The mere signing of a time study by no means impels a foreman to do his part if he is not so inclined. Signing of time studies is no more than a time-

wasting formality that causes needless bickering.

The foreman in many plants might just as well make an "X" on a time study as sign his name. He is in almost the same state of ignorance of what he is signing as the unfortunate who cannot read and write. His attitude and that of his subordinates toward wage incentives is good, bad or indifferent for reasons quite remote from those symbolized by signing the time study. The attitudes stem from the degree of confidence reposed in the time study man, the management, the enterprise and the future; and they may be warped by union rules or propaganda.

Over the long pull, employees will have confidence in time study when standards are fair. Their gripes are the results of poor administration, poor instruction and poor leadership, assuming correct principles were observed initially. If either the company or the union is shortsighted in handling time study and incentive problems, the foreman is caught in the middle. Giving him expert training will do little more than equip him to render first aid to the injured.

On the other hand, if both managements and unions see in increased productivity the solution to some of our economic problems, then a long-view attitude will be taken. Fewer expedient compromises will be made with fair incentive administration. Workers will be paid fairly for what they do—no more, no less. Then the time study training given a foreman will be productive. He will know his duties and responsibilities with respect to time study, and he will not try to, nor be expected to, do the time study man's job as well as his own. He will know enough to do his own job properly and will insist the time study man do his.

Marketing Management

How Can Business Analyze Its Markets?

BUSINESS FIRMS, both large and small, face a period ahead when effective market demands will once more assert themselves as determinants of sales volume. Then the business community will require more than ever a basis for evaluating business prospects and for appraising the factors which cause sales and profits to fluctuate. The business man must be in a position to evaluate the impact of general economic forces upon his own particular business, on his costs, investment and profits so that his decisions may be guided adequately. It is the purpose of this article to describe such a source of guidance, a method of marketing analysis which the business man can apply to the operations of his own industry or firm. The use of this method—which is known to technicians as that of correlation analysis—demands little or no technical background; it is simply a procedure for summarizing the experience of the past for the purpose of arriving at a statement of its implications for the future.

The method is illustrated graphically in the simple chart below. The problem in this case is to see how the aggregate sales of manufacturing firms are related to their combined profits before tax deductions. Each point on the chart indicates the level of profits and sales for the specified year. For example, in 1933 sales amounted to 30.6 billion dollars, while profits in that year were about 420 million dollars. The point for 1933 on the chart is located by means of these two magnitudes. The other points are similarly located.

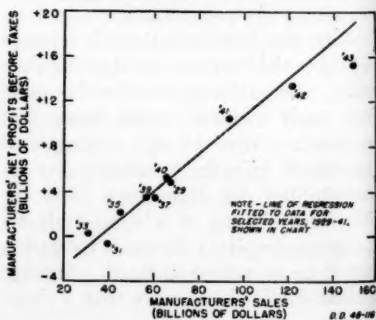
It will be noticed that, for the period 1929-43, as sales increased or de-

creased, profits also went up or down in a manner so that they tend (for the years before our entry into the war) to lie along a straight line. Specifically the relationship indicates that when sales change by 10 billion dollars, profits change by 1.7 billion dollars. In other words, the change in profits before taxes constitutes 17 per cent of the change in sales of all manufacturing firms. This conclusion applies to the totality of manufacturing firms. The percentage would be more for some firms and less for others.

In general, there are five basic steps to be considered in the study of markets by the use of relationship analysis:

1. *The element to be analyzed.* The first step is the selection of the element or item to be analyzed. The business man may be interested in such items as sales, profits, production, prices, costs and investments. An important consideration is whether the item is to be analyzed as a total or whether a separate analysis should be made of its parts. For example, an analysis of clothing sales may prove more valuable

Relation of Manufacturers' Net Profits Before Taxes to Sales



if men's, women's and children's garments are considered separately.

2. *Selection of related factors.* The second step consists in selecting the major factors which directly or indirectly cause changes in the item to be analyzed. This is perhaps the most important consideration of the analysis and requires expert knowledge of the business as well as good judgment.

In selecting the major factors, the business man will have to decide whether the item to be analyzed is most affected by industrial activity, for example, or consumer income, construction activity, cash farm income, wage rates, price changes, labor efficiency, or any of the hundreds of factors which may influence the fluctuations of the item under consideration. Some of these factors play major roles, while others are of minor importance. However, underlying the fluctuations in the items are the broad economic factors which synthesize the effect of the numerous specific factors and which can be used by proxy to represent their combined effects.

In general, therefore, one or two, or at most three, factors are usually sufficient to explain most of the variations in the item. For example, if the problem is to determine the factors influencing the price of butter, it is a simple matter to list a dozen factors such as production of butter, its stocks, imports, exports, prices of competing fats, etc., all of which affect the price of butter to a greater or lesser degree. However, the analysis is much more useful if it can be resolved in terms of a few dominant factors which account for most of the fluctuations in the price. The most important consideration in the choice of factors is that those decided upon be as nearly *causally* related to the item as possible and in any event be logically related.

An example of an illogical relationship would be the comparison of total volume of freight traffic expressed in ton-miles to national income in dollars, for one is a physical series and the other a dollar series. A logical relationship would be one between revenues from freight traffic and the national income, or between the volume of freight traffic and the physical volume of national production.

3. *Nature of the relationships.* The next step consists of determining on the basis of past experience the relation or connection between the item to be analyzed and the major factors influencing its fluctuations. The two major ways of determining these relations are by use of numerical methods and graphical methods.

The advantage of the numerical approach is that once the general formula is decided upon, any analyst will be able to arrive at the same specific formula from the data by use of definite mathematical rules. In properly using the graphical method where more than one factor is involved, considerable experience is required. As far as the business man is concerned, however, the simple graph shown above is all he needs for most purposes. In general, the graphical method is the more satisfactory and easy to understand.

4. *Continuity in the relationships.* The next step is the consideration of the continuity in relationship between the factors and the item being analyzed. A simple example will make clear the application of continuity to market analysis. Suppose that on the basis of 20 years' experience a small manufacturer of a special steel product found that his sales conformed with fluctuations in general industrial activity, so that when the latter increased or decreased by 10 per cent his sales went up or down by 15 per cent. He would

like to use this information as a basis for future policy decisions. But even though he has had 20 years of confirmation of this basic relation, he must *assume* the continuity of the relation in the future. He could not and would not use this fact if he knew, for example, that his customers were going to use substitutes for his product, but would make allowance for this special factor in his calculations.

In most cases, however, where the relation is projected into the future, it can be assumed that continuity will be preserved. Usually a relationship which has held for a long period of years covering depressions and prosperity under different political and social conditions will continue to hold in the future.

The continuity assumption implies that consumer buying habits do not deviate radically from the pattern of the past, that the income distribution is not materially altered, that methods of business or technological operations do not undergo abrupt and drastic changes, and that no cataclysmic event (such as war) occurs to disrupt the general structure and operations of the economy. The assumption of continuity does not deny the possibility of discontinuities but is used until there is evidence to the contrary.

5. *The error of forecast.* The probable error of forecast based on the use of the relationship may arise from two sources. First, estimating an item from a relationship to other factors requires that forecasts be made of these other factors; and these forecasts will usually contain errors which will be transmitted to the item that is calculated from them. A second source of error arises from the "fit" of the relationship. In the period from which it was determined, the value of the item

as calculated from the relation differs from the actual value by an amount which is called the error of estimate. For example, in the chart reproduced, the calculated profits obtained from the line for 1939 is \$3.6 billion. This compares with actual profits in that year of \$3.5 billion and represents an error of \$0.1 billion, or 3 per cent. In all business forecasting from relationships, allowance must be made for these two sources of error and the results, therefore, must be expressed as a range within which the actual values are likely to fall.

With these brief outlines in mind, let us illustrate the method as applied to the retail jewelry trade, which is concerned with consumer durable goods whose purchase is greatly affected by changes in consumer incomes:

If the sales of jewelry stores for the past 15 years are plotted on a chart similar to the one illustrated here, using the total disposable income of individuals as the related factor, it will be seen that sales went up and down as income increased and decreased. It is important from the point of view of postwar considerations that sales in the war years kept pace with expanding incomes in about the same way as would be expected on the basis of pre-war experience. In general, on the basis of the past relation it can be shown that, on the average, a change of 10 per cent in disposable income was associated with nearly a 20 per cent change in sales.

This is an important conclusion for the postwar business of jewelers. It means that when consumer income is high and increasing, jewelry sales will gain tremendously and, on the other hand, jewelers are at a disadvantage relative to other retailers when incomes and employment shrink, since

their sales drop more precipitously than the relative decline in income.

The correlation analysis method has wide applications to practically every aspect of economic activity, by industries, by firms and by regions. How-

ever, this very fact emphasizes a necessary requirement in its application, namely, that it must be used in a discriminating and cautious manner. By LOUIS J. PARADISO. *Survey of Current Business*, March, 1945, p. 6:8.

96 Ways to Stimulate Sales

DAYS that will demand energetic, vitalized selling are not far away. It is high time, then, that we unlocked the chest in which we kept the tested tools of sales stimulation and burnished them up where necessary. The following are 96 specific ideas, procedures and methods actually used to increase sales. Every one of these items promises to function as effectively in the years to come as it did in the years gone by. Check this list of 96 selling tools against your plans for the future. We dare say that you'll come up with at least one item that you'll want to add to your blueprint for the future:

1. Related selling in retail stores
2. Case histories
3. Store demonstrations
4. Circularizing dealers' prospects
5. New shipping cartons for trade shipments
6. Bill inserts for stores
7. Direct-mail campaign to dealers
8. Advertising allowances
9. Profit-sharing plan for distributors
10. Clinics for dealers and salespeople
11. Merchandising manual for retailer
12. Helping dealer sell right product (like device for measuring gloves, etc.)
13. Bulletins for dealers on various subjects (telephone selling, collection letters, etc.)
14. Helping retailers sell outside the store
15. Deals—free deals, etc.
16. Premiums for dealers
17. Mat service
18. Promotion kits for dealers
19. Motion pictures for distributors
20. Counter catalogue

21. Manual for dealer and salespeople
22. House magazine for dealers
23. Dealer contest
24. Accounting system for retailers
25. Trade paper advertising
26. Handling inquiries received from the advertising
27. Reports from salesmen
28. Portfolio for manufacturers' salesmen
29. Bulletins for manufacturers' salesmen
30. Contest for manufacturers' salesmen
31. Quota system for distributors
32. Sales manual
33. Special merchandise arrangements
34. Special tables or sections for stores
35. Window display contest; interior display contest
36. Routing exclusive window displays from one dealer to another
37. Giant blowups
38. Counter cabinets
39. Use of demonstrators
40. Window displays
41. Interior displays
42. Counter demonstration devices
43. Itinerant displays
44. Assortment packages
45. Improved method of packing
46. New convenience of container
47. New use of package
48. New size (larger or smaller) for container
49. New labels for container
50. New color scheme for container
51. New general design of container
52. New construction of container
53. Cross-advertising on package
54. Double-use containers
55. Improved package design
56. Package inserts
57. Tested sales sentences
58. Clubs for salespeople
59. Correspondence course for salespeople
60. Instruction manual for salespeople
61. Manual for jobbers' salesmen
62. Quotas for jobbers' salesmen

63. Mailing lists of jobbers' salesmen and retail salespeople (home addresses)
64. General helps for salespeople
65. Jobbers' salesmen contests
66. Dealers' salesmen contests
67. Tags on merchandise (to help salespeople do more effective selling job)
68. Cooperative merchandising with a non-competitive manufacturer
69. Consumer contest
70. Promotional calendar
71. Style promotions
72. Fashion show
73. Tests of brand pulling power
74. Interesting wives, mothers, etc., of dealers, salespeople, manufacturers' salesmen
75. Bringing back lost customers (both lost accounts to the manufacturer and lost customers to the dealer)
76. Special "weeks"
77. Store-wide promotions—promotions in more than one department—inter-department merchandising
78. Plans for tying up with special events—new events, holidays, etc.
79. Anniversary promotions
80. Finding changes in consumer habits (rug sizes have not kept pace with changes in room design)
81. Sampling
82. Guarantee
83. Installing departments in stores
84. Exhibition and demonstration trucks and trailers
85. Model stock plans
86. Development of new uses
87. Trade-ins
88. Installment selling
89. Consignment selling
90. Exhibits at shows, fairs, etc.
91. Factory showrooms (model store at factory, etc.)
92. Advertising novelties and specialties—calendars, etc.
93. Exclusive agency plan
94. Miniature models for demonstration purposes, etc.
95. Trial offers
96. Dramatic demonstration ideas for products

From a compilation by Grey Advertising Agency, Inc.

Financial Management

Intangible Factors Affecting Renegotiation

THE COMPANY engaged in renegotiation that desires to make an intelligent presentation of its case must remember that most price adjustment boards are composed of business men, not accountants. There is an unfortunate tendency to clutter up renegotiation briefs with unnecessary schedules and financial statements, and to ignore completely the type of factors which a board must weigh most carefully in determining the relative performance of war contractors. Submitted data should be complete but not ponderous, exhaustive but not repetitious. Although oral testimony is helpful, every major argument should be made part of the written record.

Article four of the present renegotiation law defines excessive profits as the portion of war profits which is determined to be excessive after considering the following factors:

1. Efficiency and productive performance.
2. Reasonableness of costs and profits with particular regard to: (a) volume; (b) normal prewar earnings; (c) comparison of war and peacetime products.
3. Amount and source of capital.
4. Extent of risk assumed, including price risk.
5. Contributions to the war effort.
6. The character of the business, including complexity of manufacturing techniques, character of subcontracting, and the like.

In many cases it may be desirable even at this late date for manufacturers to establish renegotiation sections to

study operations throughout the year in order to accumulate the data necessary to implement the foregoing points. In certain instances a "check list," circulated among responsible officials in order to obtain necessary information, may be useful. Some of the factors to be considered in such a check list cover the following: (1) efficiency of performance; (2) reasonableness of costs and profits; (3) risk assumed and nature of operations; (4) contributions to the war effort.

Efficiency of Performance. The following are examples of questions bearing on this factor:

1. Did we produce any unusual products during the past year?
2. Did the armed services make any unusual demands with respect to quality or production or time of deliveries?
3. Have we done an efficient conversion job?

4. What methods of production control have we installed to insure efficient utilization of critical materials, manpower and facilities?

5. Are any data available to substantiate reductions in cost? Can we specifically support this by case studies? Do our standards provide a favorable efficiency variance which may be used in this connection?

6. Have we devised new production techniques or new products?

7. Have existing facilities been adapted to undertake new work, saving investment of government funds?

8. Are our costs lower than those of other producers because of utilization of fully depreciated machinery and equipment, or machinery which was built by us and included in capital assets at manufactured costs?

Reasonableness of Costs and Profits. In general, price adjustment boards use net income for the period from 1936 to

1939 as a measure of operating profits, ordinarily allowing a "normal" rate of profit on a "normal" sales volume, plus a reduced rate of profit on sales attributable to war business. In this connection it is well to analyze past operating results, as the period from 1936 to 1939 may be an inadequate standard of "normal" earnings. Some of the factors which may be considered are:

1. By reviewing the entire earnings record of the organization, is it possible to find any other four-year spans which may provide a more favorable basis of normal earning power than the excess profits tax base years?

2. Has an application for relief been filed under Section 722 of the Internal Revenue Code? If so, is the amount of normal net income claimed substantially higher than the 1936 to 1939 average?

3. Is the organization a member of an industry which is subject to sporadic and cyclical periods of earnings?

4. Has adequate consideration been given to adjusting normal earnings for natural growth since 1939?

5. Is the contractor a member of an industry that has a characteristically high rate of profit? If so, is the rate of profit realized on current war contracts substantially below the rate of profit realized on normal peacetime business?

Risk Assumed and Nature of Operations. The operating risks a contractor assumes in war production are an important consideration in renegotiation proceedings. As in many other things, risk is purely relative. The size of the company and the nature of the manufacturing processes should be carefully studied. A sizable contract for a new product may require the undertaking of grave risks for a small company even though a high rate of profit may be

realized in its performance. Therefore contracts should be studied on the following basis:

1. Were any major contracts undertaken during the renegotiable year and, if so, did the contractor assume unusual risks with their performance? Any such assumed risks should be stressed strongly and specifically in the report to the board.

2. Does a review of current operations, particularly after termination of the Renegotiation Act, indicate the possibility of allocating potential or actual losses against renegotiable business?

3. Have operations been overextended to such a degree that the working capital position of the contractor may be injured?

4. Will operations during reconversion necessarily be inefficient because of the difficulty in making an immediate cutoff when war contracts are terminated, and are any of such costs properly war costs? Although, by directive, boards may not consider reconversion expenses in arriving at a decision as to the margin of profit to be allowed, their thinking in regard to intangibles may be influenced by a schedule showing in reasonable detail the costs expected to be incurred in converting from a war to a peacetime economy.

Contributions to the War Effort.
Price adjustment boards will ordinarily

give utmost consideration to the contributions which the contractor has made to the war effort. In this connection, consider the following:

1. Have we made unusual inventive or developmental contributions?

2. Is our production of unusual complexity?

3. Have we cooperated with the government in carrying out difficult production assignments? If so, what may we specifically use to document this point?

4. Has the company's postwar position been prejudiced as a result of disclosing production techniques to competitors?

5. What was the status of the company in the industry before the war, and what will its relative status be after the war?

6. Has the company's growth during the war period been limited to non-commercial applications, with the result that commercial markets may have been curtailed?

7. How much assistance has been given to other producers and subcontractors? Have we in effect created our own postwar competition?

8. Have we subcontracted complete units at a low rate of profit and assumed a continuing risk in performance guarantees?

BY FRANK A. NEMEC. *N.A.C.A. Bulletin*, February 15, 1945, p. 628-9.



Techniques of Executive Planning

BUILT from the ground up and in a democratic spirit, planning can become a powerful instrument in an organization. Each man, from the workman to the manager, should engage in it creatively. While it will require a high degree of mental discipline from members of the executive staff, sound planning will broaden their horizon and give them a firmer grip on their responsibilities.

Applied on the executive level, planning comprises five major steps: First, the responsible executive establishes what is to be done. After a thorough study of present conditions, available executives, skilled labor, equipment, and the objectives to be attained, he decides upon the main lines of his program.

The second step is to determine the time required for each element of the plan. If the problem is at all complicated, the executive may use Gantt charts for accurate timing of starting dates, rates of production, and dates of completion.

The third step is assignment of responsibility for carrying out the plan. Obviously, the executive has had this in mind while he was working out his program and its timing; but when the plan is drawn up, he checks it to see that duties do not overlap and clearly fixes responsibility for the quantity of work and the time in which it is to be completed.

The executive's fourth step is to provide for each part of the program the required equipment, materials, trained labor, and finances.

The fifth and last step is to follow up the execution of his program until the objective is reached. The executive keeps the plan before him and on

it records the progress both in detail and on broader lines. He sees that each element begins on time and moves forward at the rate agreed upon. He concentrates his attention on removing the obstacles which threaten to interfere with the established time schedule.

The execution of company policies through the application of planning on an executive level is outlined in the following illustration:

PLANNING OF OVERHEAD

While the manufacturing program for the coming year is being developed, the executive in charge of production also considers the changes he will need to make in order to turn out the volume of work needed to meet sales forecasts. His technical assistants figure the machine capacities required, requisitioning new equipment where needed and removing from the shop floors the machines which will not be used. The plant manager then looks over his organization and decides where his supervisory force needs to be strengthened or can be reduced. These are the first steps in planning the overhead expenses of his plant for the period covered by his production program.

If there is a company executive in charge of budgeting, he takes up the work at this point. He is usually an engineer or production executive who understands shop problems and in whose practical knowledge the superintendents and foremen have confidence. He must know costs and have available a classification of overhead expense accounts and records of expenditures which have been charged to those accounts during the last several years. Taking into consideration the plant manager's requisitions for new equip-

ment and the normal replacements, he calculates the fixed expenses for each department and group of machines. In consultation with the foremen, he estimates expenses for indirect labor, repairs, shop supplies and power. Cost of supervision is estimated on the basis of the manager's plans for supervisory personnel.

The figures for the various departments are then grouped and the budget officer discusses them with the superintendents, who are familiar with the manager's production schedule for the coming year. If a superintendent does not consider the expense estimates accurate, he examines them with his foremen and they agree on as low an expense as can be expected if conditions are good. Overhead budgets should be tight, for if they are too generous many inefficiencies will not be brought to light.

When superintendents and foremen have agreed that budgets are correctly figured, the budget officer builds up his totals according to lines of responsibility. If there is any doubt as to those lines, an organization chart is drawn and submitted to the plant manager for his suggestions and approval. A clear organization chart shows the direct lines of authority, and a budget built up in that way fixes responsibility for incurring overhead expenses.

When the budgets of overhead accounts for the entire plant have been tabulated, they are presented to the plant manager. It is easier for an executive to secure action if the budgets are presented on Gantt charts. Each foreman receives at the same time a production chart based on the year's program, which has served as a starting point for working out the budgets. The light and heavy lines on this chart show in what proportion the output

has exceeded or fallen short of the program. The foreman then looks at these variable items on his budget charts and, if the lines correspond with the production lines, he knows that the expense is reasonable. If the lines do not correspond, he looks for the cause and a remedy.

A wise superintendent does not use the information on these charts to criticize the foremen but rather to help them take their full share of responsibility, not only for production but for overhead, which is the great part of their costs and which affords more opportunities for savings than does the purchase of materials.

The superintendent discusses the building up of these budgets thoroughly with the foremen before the year begins, whenever possible getting them to set difficult goals for themselves. If their figures are too high, he helps the foremen to understand that the success of the business depends on getting costs down to a lower level and that some way must be found to reduce the budgets. The foremen usually find some means to accomplish the desired result.

Within five days after the end of each month, the figures are entered and the lines drawn on the charts by the budget office, and prints are given to the foremen and the superintendent at the same time. Two days later, the superintendent asks the foremen to come to his office individually, and they carefully compare the current and previous months' records. The superintendent does not find fault but, after calling attention to a certain long line, he asks what the foreman has decided to do about it. The latter usually has the answer ready, for he likes this way of solving problems and, during the two days since he received his chart, he has

been spending time developing ideas to bring these expenses within his previous estimates.

Following the conferences between superintendents and foremen, the works manager receives from each superintendent a condensed memorandum commenting on the long and short lines on the charts and stating the action he proposes to take to bring his overhead expenditures under control. The manager discusses these possibilities with the superintendents and gives them whatever advice or authorization they may need. In addition to factory

overhead, these charts also show the budgets for administration, selling, buying and storing, which make up the complete overhead expenses of the company. For each of these divisions of the business, there are supporting charts showing the classifications of expenditures arranged according to lines of responsibility.

From *Executive Planning*, by WALLACE CLARK (Wallace Clark & Company, New York). 22 pages.

Note: This study also covers timing of executive plans, planning of sales, planning of production, and planning of finances.—Ed.

Insurance

Social Security Extension

RECOMMENDATIONS for extension of coverage of the country's Social Security program to many millions of workers now excluded and for other changes to strengthen the program's effectiveness have been advanced by representative committees of the life insurance business. These recommendations were presented through a joint committee of the American Life Convention and the Life Insurance Association of America and a committee of the National Association of Life Underwriters.

While endorsing the principle of Social Security and recognizing the social and economic value of the system, the committees advise against changes in the system which would impair the will to work, or would be so costly as to affect adversely the soundness of the nation's over-all economy.

The statement, issued through the Institute of Life Insurance, makes the following recommendations:

Extension, wherever feasible, of the coverage of old-age and survivors' insurance to all those gainfully employed groups not now covered, including agricultural and domestic workers, government employees, railroad workers, employees of non-profit organizations, and the self-employed.

A thorough review of processes by which benefits and eligible status are determined under old-age and survivors' insurance. For example, the present minimum benefits of \$10 a month might well be raised to, say, \$20 a month (\$30 per aged couple), subject to appropriate safeguards, with no increase in the present top limit of \$85 a month.

Close study as to how best to safeguard the interests under old-age and survivors' insurance of men and women in the armed forces, and of persons who continue to work after age 65.

Extension of old-age and survivors' insurance to provide benefits for total

and permanent disability after age 55, thereby making allowances for the fact that some workers become prematurely old in the sense that they can no longer work.

Extension, wherever feasible, of unemployment compensation protection to all groups of workers, with the exception of self-employed and possibly employees of non-profit organizations where the added weight of payroll taxes on these institutions might restrict their operations.

Study of the practicability of having unemployment compensation benefits related, in part, to the number of dependents of a married worker.

Continued experimentation by the states with merit rating in financing unemployment benefits before arriving at a positive conclusion as to the relative weights of its advantages and disadvantages.

A moderate increase in the maximum number of weeks for which unemployment compensation is paid if and when the financial position of state plans permit, rather than shortening of the waiting period or an increase in the level of benefits.

The statement calls for a reexamination of the entire problem of financing old-age benefits. It characterizes as unsound proposals that Social Security taxes should be increased to combat inflation or to help finance the war.

Recommending that a committee of qualified persons be appointed by Congress to review the financial question fully, the statement says:

"This review is particularly desirable owing to the fact that a reserve fund of six billion dollars has already been accumulated and is rapidly increasing on account of the current heavy excess of income over outgo.

Furthermore, with up-to-date estimates of benefit payments, a revised tax schedule should be developed which would make it unnecessary for Congress to go through what now appears to be an annual process of deciding what the next year's tax rate is to be."

The statement urges great caution in considering proposals to increase the level of unemployment benefits, declaring that, if enacted, they may endanger the will to work. It cites the Beveridge report in Great Britain as giving recognition throughout to the importance of the fundamental principle that Social Security benefits must not impair incentives to work and save, and declares that the principle that Social Security benefits should not be above subsistence levels is particularly applicable to unemployment compensation. The committees express grave doubts as to the wisdom of experimenting with any extension of unemployment compensation to cover temporary disability occasioned by accident and sickness.

The committees note that plans for medical and hospital care are often associated with income maintenance. Whether or not they actually form part of the Social Security program, the statement continues, adequate medical attention and hospital care are needed to lessen the extent to which illness reduces the ability to earn a living. Pointing out that voluntary insurance of the cost of hospital care is already widespread and growing fast, and that similar protection against the cost of medical care, heretofore not so widespread, is rapidly growing in use and public favor, the committees urge:

"Every effort should be made to utilize voluntary cooperative enterprise before resorting to a compulsory government program."

The Spectator, March, 1945, p. 423.

Book Notes

[Please order books directly from publishers]

MANAGEMENT AT THE BARGAINING TABLE. By Lee H. Hill and Charles R. Hook, Jr. McGraw-Hill Book Company, Inc., New York, 1945. 300 pages. \$3.00. A thorough treatment of collective bargaining, giving management and its representatives a fresh and broad viewpoint on the principles involved and a knowledge of agreements, their content, and the steps in negotiating them that will enable management to protect its authority and properly perform its managerial functions. The book treats specific clauses of agreements, noting particularly their interrelationships and significant features for management; and it considers the effect of War Labor Board decisions and procedures upon collective bargaining negotiations, both in direct dealings with unions and in proceedings before the WLB.

NOTE: A more extensive review of this volume will appear in an early issue of *THE MANAGEMENT REVIEW*.

IMPROVEMENT OF LABOR-UTILIZATION PROCEDURES. *Bulletin No. 807*, Bureau of Labor Statistics, U. S. Department of Labor, Washington 25, D. C., 1945. 44 pages. 10 cents. A discussion of the principles which may be used to increase production and productivity through improvements in labor-utilization procedures. The topics covered include: absenteeism of workers, services for employees, labor turnover, full use of community labor resources, training and upgrading, wage structure, working hours and shift schedules, supervision of workers, plant organization, plant methods, working conditions and safety, employee morale.

CORPORATE CASH BALANCES—1914-43: *Manufacturing and Trade.* By Friedrich A. Lutz. National Bureau of Economic Research, New York, 1945. 132 pages. \$2.00. Dr. Lutz traces the behavior of cash balances of business enterprises over the three decades, 1914-43; analyzes the reasons for their behavior; and discusses some of the implications of the present cash balance position of corporations. The analysis attempts to answer such questions as: Does the behavior of corporate cash balances over the period 1919-39 show a definite pattern? If so, what factors determined this pattern? How did corporate cash balances behave during the period of World War I? What influence has World War II had on the movement of cash balances?

ORGANIZED LABOR. By Harry A. Millis and Royal E. Montgomery. McGraw-Hill Book Company, Inc., New York, 1945. 930 pages. \$6.00. This important new work, Volume III of the authors' well-known series, *The Economics of Labor*, constitutes an extensive analysis of the organized labor movement in the United States. Among the topics covered are: nineteenth-century American unionism; American trade union history, 1890-1920; American unionism in the 1920's; American unionism since 1930; trade union structure, government and interrelationships; trade union institutionalism; the union in industry; the theory of collective bargaining; trade union policies and methods; trade unions, the law and the courts; the problem of strikes and lockouts; conciliation and arbitration of labor disputes; labor and politics; employee representation plans and independent unions; etc.

TIME FOR PLANNING. By Lewis L. Lorwin. Harper & Brothers, New York, 1945. 273 pages. \$3.00. This book, by the founder of the National Economic and Social Planning Association (which has more recently become the National Planning Association), combines a statement of the history, philosophy and broad methods of the planning idea as it affects different groups in our society and our relations with other countries.

PROSPERITY: *We Can Have It If We Want It.* By Murray Shields and Donald B. Woodward. McGraw-Hill Book Company, Inc., New York, 1945. 190 pages. \$2.00. Two well-known American economists present their program for postwar prosperity.

PRACTICAL APPLICATIONS OF DEMOCRACY. By George B. de Huszar. Harper & Brothers, New York, 1945. 140 pages. \$2.00. Part I of this volume states the two main problems we have to face: disintegration and inaction; and it points out the necessity of integration and action through an effective democracy. It further shows how such integration and action can be attained through building social structure out of social units—i.e., problem-centered groups. Part II illustrates the application of this method of building problem-centered groups in various fields: community, government, education, art, leisure, journalism, employment, vocational training and industry. Part III relates the significance of the method to the participating individual and discusses its effects on him.

PLASTICS CATALOG: *The 1945 Encyclopedia of Plastics.* Plastics Catalogue Corporation, 122 East 42 Street, New York 17, N. Y., 1945. 1,178 pages. \$6.00. This ninth revised and expanded *Plastics Catalog* continues the chronicle of the industry's wartime advances presented in previous editions. The introductory section includes a full-color review of the civilian plastics of the past together with their counterparts of the future as rendered by a group of well-known industrial designers. The body of the volume describes the materials from which these new applications will be made and the techniques which will be employed in their manufacture.

BIG GOVERNMENT: *Can We Control It?* By Merlo J. Pusey. Harper & Brothers, New York, 1945. 240 pages. \$2.50. This book traces the trends toward dangerous and unwieldy bigness in our Federal Government, assesses the significance of these trends, and advocates a number of practical reforms.

THE HEADWEAR WORKERS: *A Century of Trade Unionism.* By Charles H. Green. United Hatters, Cap and Millinery Workers International Union, 245 Fifth Avenue, New York, 1944. 269 pages. \$2.00. This history of the United Hatters, Cap and Millinery Workers International Union, written by an officer of the union, traces the development of trade unionism among the headwear workers since 1823, when the first union of hatters was convicted of "conspiracy" in New York because its members refused to work with a hatter who accepted wages below the union standard.

TOMORROW'S BUSINESS. By Beardsley Ruml. Farrar & Rhinehart, Inc., New York, 1945. 238 pages. \$2.50. The author of the pay-as-you-go tax plan here outlines his views on an important group of subjects, including business management, national fiscal policies, tariffs, cartels, labor unions, and a permanent public works program.

PRINCIPIO TO WHEELING: 1715-1945. By Earl Chapin May. Harper & Brothers, New York, 1945. 335 pages. \$3.00. Two centuries of metallurgical pioneering and industrial expansion are delineated in this interesting chronicle of the development of the American iron and steel industries. Mr. May traces the evolution of a colonial iron furnace at Principio, Maryland, into huge blast and open-hearth furnaces and steel mills at Wheeling, West Virginia, which are now operating to win the second world war.

Personal Mailroom Boosts Worker Morale

A FACTORY mailroom for employees is provided at Faichney Instrument Corporation, Watertown, N. Y., producer of clinical thermometers. Here may be found writing tables and stationery, so that workers may write their relatives and friends in the armed services during rest periods or when off shift.

Also, workers are allowed to have mail come to them in care of the plant. They call at the mailroom for letters before going on shift. Theory behind this is that a letter from a boy or girl at the front boosts the morale of the average worker. Special delivery and airmail letters reach the worker sooner via the plant mailroom.

Workers are notified immediately when specials or airmails arrive, and can pick them up at the end of the shift.

The mailroom employs people who wish to serve on the home front but who are not physically able to stand up under the strain of regular factory routine.

—*Factory Management and Maintenance* 3/45

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Review